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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,874	08/04/2003	Brian G. Johnson	ITO.0047US (P16202)	5272

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EXAMINER

FORDE, REMMON R

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/633,874

Applicant(s)

JOHNSON, BRIAN G.

Examiner

Remmon R. Fordé

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,12,13,16,22-24 and 26 is/are rejected.
- 7) ☒ Claim(s) 2,7,9-11,14,15,17-21 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 and the other respective claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ovshinsky.

Referencing Figure 2, Ovshinsky discloses a method provided with: forming a substantially planar surface (130); and forming a phase change material (100) between a pair of horizontally spaced electrodes (110 & 120) formed on the substantially planar surface. (Paragraphs [0025] – [0028].)

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Claims 1, 3-6, 8, 12, 13, 16, 22-24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Wicker

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1 and 12, referencing Figures 1-11, Wicker discloses a method of making a lateral phase change memory device (110) provided with: forming a substantially planar surface (150); and forming a phase change material (120) between a pair of horizontally spaced electrodes (130 & 140) formed on the substantially planar surface. (Column 2, line 46 – Column 8, line 39.)

Regarding claim 3, referencing Figures 1-11, Wicker further discloses forming a conductive line (652 & 654) in a substrate (600) and forming the material (120) and the electrodes (130 & 140) over the substrate. (Column 9, lines 7–51.)

Regarding claim 4, referencing Figures 1-11, Wicker further discloses forming a selection device (640) in the substrate. (Column 9, lines 7 – 51.)

Regarding claim 5, referencing Figures 1-11, Wicker further discloses forming an electrical connection from the substrate (600) to a second electrode (651 & 653). (Column 9, lines 7 – 51.)

Regarding claim 6, referencing Figures 1-11, Wicker further discloses electrically coupling (670) the second electrode (651 & 653) to one of the horizontally displaced electrodes (130). (Column 9, lines 7 – 51.)

Regarding claim 8, referencing Figures 1-11, Wicker further discloses forming two pairs of electrodes for two spaced cells at the same time. (Column 2, line 46 - Column 8, line 39.)

Regarding claim 13, referencing Figures 1-11, Wicker further discloses that the spaced electrodes (130 & 140) and the phase change material (120) are formed over a substrate (600) having a horizontally disposed upper surface. (Column 9, lines 7-27.)

Regarding claim 16, referencing Figures 1-11, Wicker further discloses that the phase change material is a chalcogenide material. (Column 6, line 64 – Column 7, line 6.)

Regarding claim 22, referencing Figures 1-11, Wicker further discloses a system (900) provided with a controller (910); a wireless interface (940) coupled to the controller; and a semiconductor memory (930) coupled to the device, the memory including a substantially planar surface (150), a pair of horizontally spaced electrodes (130 & 140) formed on the surface, and a phase change material (120), the electrodes sandwiching the phase change material. (Column 2, line 46 – Column 8, line 39 & Column 10, lines 7-55.)

Regarding claim 23, referencing Figures 1-11, Wicker further discloses that the phase change material is a chalcogenide. (Column 6, line 64 – Column 7, line 6.)

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Regarding claim 24, referencing Figures 1-11, Wicker further discloses that the spaced electrodes (130 & 140) and the phase change material (120) are formed over a substrate (600) having a horizontally disposed upper surface. (Column 9, lines 7-27.)

Regarding claim 26, referencing Figures 1-11, Wicker further discloses that the wireless interface (940) includes a dipole antenna. (Column 10, lines 36-55.)

### ***Allowable Subject Matter***

Claims 2, 7, 9-11, 14, 15, 17-21 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

~~NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800~~

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30):

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé